

REMARKS

During the interview with the Examiner on October 8, the Examiner agreed that Shaw did not suggest the invention recited in the claims. In the new Office Action, the Examiner has issued a new non-final Action with a new prior art rejection – namely the original Shaw reference combined with the new Mori reference.

With respect to claim 1, at page 2 of the Office Action the Examiner states at the third paragraph that Shaw discloses a method for producing pump light in a region of a laser light exit. This is incorrect. Shaw has no teaching anywhere of reducing pump light in the region of a laser light exit. Shaw teaches directly away from the invention by requiring *total* reflection at the boundary between the pump fiber 14 (which he calls a jacket) and an air interface throughout the entire length of his device, including at the end portion 27. This is even more true when Shaw clearly states at column 5, lines 26-30 that although the refractive index at the boundary of the pump fiber 14 is formed by air, a secondary cladding may surround the jacket 14 (pump fiber) *to reduce losses* which may otherwise occur at the interface between the jacket 14 (pump fiber) and the surrounding air. Thus this is a direct teaching away since if this secondary cladding is added, the reference teaches that *no* pump light may exit from the pump fiber shaped jacket 14 anywhere, and particularly at the end where laser radiation exists.

At page 3, line 2 of the Office Action, the Examiner states that pump light exits the pump fiber at a section preceding the laser light exit and allows substantial remaining pump light to escape from the pump fiber. This is clearly not correct as explained above. Shaw does teach it is *not* advantageous to have *any* pump light escape at any region, and particularly does not allow any pump light to escape at region 27.

At page 3, the Examiner states that Shaw does not disclose removing at least a portion of the sheath at the last section. First, it is important to understand that Shaw does not show in his Figure 1 any sheath at all. The shaped jacket 14 *is not a sheath* but rather is the *pump fiber*. Although a secondary cladding (which would be a sheath) may be added as explained above, Shaw never teaches any removal of this secondary cladding at the output end.

The Examiner cites Mori for removing at least a portion of the sheath at the last section to allow pump light to exit before the end of the laser resonator fiber. Mori is irrelevant because it has nothing to do with a laser resonator fiber to which Applicant's claims are directed and which is recited throughout the claims. Therefore, Mori can suggest nothing about a laser resonator fiber. Mori is nothing more than an optical fiber on a cloth for medical treatment where light is passing through the optical fiber. *An optical fiber is not a laser resonator*. An optical fiber merely carries light. As shown in Fig. 2 of Mori, in order to allow ordinary non-laser light (which is not pump light for a laser) to escape from the optical fiber one removes a portion of the outer sheath. In order to support an obviousness rejection, there must be something in the primary reference or in the secondary reference which suggests the combination of the two. But since Mori is totally irrelevant – has nothing to do with a laser resonator - one skilled in the art could never be led to combine the two.

In order to solve the problem of a laser resonator where pump light interference occurs at the output of the laser resonator and in order to eliminate this pump light interference one removes a portion of the sheath surrounding the pump fiber in order to allow the escape of remaining pump light. Mori has nothing to do with pump light but is merely an optical fiber where some non-laser light is allowed to escape in order to support medical treatment of a patient. There is no connective

teaching between the two references, which could allow one skilled in the art to combine the two.

The Examiner bears the initial burden of factually supporting any *prima facie* conclusion of obviousness. MPEP 2142 at p. 2100-128. As stated there, the Examiner must establish a *prima facie* case of obviousness. Also, as stated at MPEP at 2142,

"First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings."

Here Shaw teaches directly away from the invention by teaching that no pump fiber light should escape. Therefore there is no motivation to combine Mori with Shaw.

As stated at MPEP 2142, the page 2100-129,

"When the motivation to combine the teachings of the references is not immediately apparent, it is the duty of the Examiner to explain why the combination of the teachings is proper."

The Examiner has not shown why the combination of the teachings is proper. Furthermore, the level of skill in the art cannot be relied upon to provide the suggestion to combine references. MPEP 2143.01 at p. 2100-129.

For the above reasons, all the claims are allowable and it is respectfully requested that the Examiner pass this case to issue.

Respectfully submitted,




(Reg.#27,841)

Brett A. Valiquet
Schiff Hardin & Waite
Patent Department
6600 Sears Tower
Chicago, Illinois 60606
Telephone: 312-258-5786
Attorneys for Applicants
CUSTOMER NO. 26574

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BRETT A. VALIQUET

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